

What is claimed is:

1 1. A method of startup for an optical drive with
2 an auto-balance system, comprising the steps of:

3 providing an optical disk and loading the optical
4 disk into the optical drive with the auto-
5 balance system; and

6 performing a startup procedure for the optical
7 drive, the startup procedure comprising a servo
8 activating procedure, a system parameter
9 adjustment procedure, and a rotation speed
10 control procedure for controlling the rotation
11 speed of a spindle motor of the optical drive;

12 wherein the system parameter adjustment procedure
13 and the rotation speed control procedure are
14 performed alternately.

1 2. The method of startup for an optical drive with
2 an auto-balance system according to claim 1, wherein the
3 servo activating procedure further comprises:

4 a rotating procedure of the spindle motor by a
5 spindle server for activating closed-loop
6 control of the spindle motor;

7 a focusing procedure of a focus point of the optical
8 drive at a recording surface of the optical
9 disk along a focusing direction by a focus
10 server for activating closed-loop focus control
11 of the focus point; and

12 a tracking procedure of the focus point at a
13 tracking position of the optical disk along a

14 tracking direction by a track server for
15 activating closed-loop track control of the
16 focus point.

1 3. The method of startup for an optical drive with
2 an auto-balance system according to claim 1, wherein the
3 system parameter adjustment procedure is comprised of an
4 optical signal adjustment procedure and an electric
5 signal adjustment procedure for the optical disk.

1 4. The method of startup for an optical drive with
2 an auto-balance system according to claim 1, whereat the
3 rotation speed control procedure is performed cyclically
4 when the system parameter adjustment procedure is
5 performed with a cycle time of ΔT .

1 5. The method of startup for an optical drive with
2 an auto-balance system according to claim 4, whereat the
3 rotation speed control procedure is performed for
4 maintaining the rotation speed of the spindle motor
5 according to a corresponding portion of a spindle motor
6 RPM profile.

1 6. The method of startup for an optical drive with
2 an auto-balance system according to claim 4, wherein an
3 interrupt subroutine is performed cyclically with the
4 cycle time of ΔT to perform the rotation speed control
5 procedure.

1 7. A method of startup for an optical drive with
2 an auto-balance system, comprising the steps of:

3 providing an optical disk and loading the optical
4 disk into the optical drive with the auto-
5 balance system; and
6 performing a startup procedure for the optical
7 drive, the startup procedure comprising a servo
8 activating procedure, and a system parameter
9 adjustment procedure;
10 wherein a rotation speed control procedure for
11 controlling a rotation speed of a spindle motor
12 of the optical drive is performed cyclically
13 when the system parameter adjustment procedure
14 is performed.

1 8. The method of startup for an optical drive with
2 an auto-balance system according to claim 7, wherein the
3 servo activating procedure further comprises:

4 a rotating procedure of the spindle motor by a
5 spindle server for activating closed-loop
6 control of the spindle motor;

7 a focusing procedure of a focus point of the optical
8 drive at a recording surface of the optical
9 disk along a focusing direction by a focus
10 server for activating closed-loop focus control
11 of the focus point; and

12 a tracking procedure of the focus point at a
13 tracking position of the optical disk along a
14 tracking direction by a track server for
15 activating closed-loop track control of the
16 focus point.

1 9. The method of startup for an optical drive with
2 an auto-balance system according to claim 7, wherein the
3 system parameter adjustment procedure is comprised of an
4 optical signal adjustment procedure and an electric
5 signal adjustment procedure for the optical disk.

1 10. The method of startup for an optical drive with
2 an auto-balance system according to claim 7, wherein an
3 interrupt subroutine is performed cyclically to perform
4 the rotation speed control procedure.

1 11. The method of startup for an optical drive with
2 an auto-balance system according to claim 10, wherein the
3 interrupt subroutine is performed for maintaining the
4 rotation speed of the spindle motor according to a
5 corresponding portion of a spindle motor RPM profile.

1 12. The method of startup for an optical drive with
2 an auto-balance system according to claim 7, wherein the
3 servo activating procedure and the system parameter
4 adjustment procedure are performed by a main program.